REMARKS

Claims 1–28 are pending in the present application. Claims 19–28 are withdrawn as directed to a non-elected invention. Claims 1–3 have been amended herein for clarity to more particularly define the invention and are not narrowing. Support for the amendments to the claims can be found throughout the specification and in the language of the original claims as set forth below. In light of these amendments and the following remarks, Applicants respectfully request entry of these amendments and reconsideration of this application.

Applicants respectfully acknowledge the Examiner's determination that claims 6 and 8–17 appear to be free of the art.

Claim Rejections-35 U.S.C. § 112, Indefiniteness

The Examiner has rejected claims 1–18 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which is regarded as the invention.

Specifically, the Office Action states that the pathway to be tested for inhibitors is in plants in claim 1, however, step (a) does not require that the cells of plastid bearing organism be a plant. Furthermore, the Office Action states that claim 3 does not require that the suspension in step (a) be a plastid, but only if a plastid, that it be a chromoplast or chloroplast.

Claim 1 is amended herein to recite: "preparing a suspension of plant cells or plastids of a plastid-bearing plant..." and claim 2 is amended herein to recite: "wherein the plastid-bearing plant..." in order to provide antecedent basis. Claim 3 is amended herein to recite: "wherein the suspension in step (a) is a suspension of plastids, wherein..."

Applicants believe that in view of the foregoing amendments to the claims, the Examiner's objections to the claims have been overcome and applicants respectfully request the entry of these amendments and withdrawal of this objection.

Claim Rejections-35 U.S.C. § 102(b)

The Office Action states that claims 1–3 and 7 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Haughan et al. (1987) *Biochem. Biophys. Res. Comm.* **146:**510–516. Specifically the Office Action states that Haughan et al. anticipates claims 1–3 and 7 directed to a method for use in screening for the presence of inhibitors in the terpenoid pathway *via 1-deoxy-D-xylulose-5-phosphate* (DXP) in plants on the basis that Haughan et al. discloses a method comprising:

(a) preparing a cell suspension of celery cells in a culture medium,

(b) adding a labeled terpenoid precursor (C^{14} acetate),

(c) incubating,

(d) isolating 4α-methylsterols by extraction,

(e) repeating with addition of paclobutrazol,

(f) comparing the control value with the value obtained when paclobutrazol was added to the incubation (Table 1).

The MPEP § 2131 requires that to anticipate a claim, the reference must teach every element of the claim and states:

> "A claim is anticipated only if each and every element as set forth by the claim is found, either expressly or inherently as described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California,* 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.,* 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicants assert that Haughan et al. does not teach a method for screening for inhibitors of an enzyme in the biosynthetic pathway of terpenoids via DXP and thus does not anticipate the claimed invention. Specifically, Haughan et al. discloses a method to characterize the inhibition of sterol biosynthesis by paclobutrazol by measuring the changes in the accumulation/incorporation of labeled acetate into 4α-methylsterols in the presence and absence of paclobutrazol. In contrast, the present invention claims a method for screening the inhibition of an enzyme(s) in the biosynthetic pathway to terpenoids via DXP.

Although Haughan et al. discloses a general method for examining the inhibition of sterol (terpenoid) biosynthesis as outlined by the Examiner, the reference does not describe screening for inhibition of terpenoid biosynthesis through DXP as claimed in the present invention. The teachings of Haughan et al. are directed to terpenoid biosynthesis through the mevalonate pathway. The pathway for terpenoid biosynthesis through DXP (nonmevalonate pathway) was not demonstrated to exist in bacteria until 1993 by Rohmer et al. and in plants until 1997 by Arigoni et al. (page 2, lines 9–12 of the specification), several years after the publication of Haughan et al. (1987). Terpenoids may be synthesized in plants through either the classical pathway involving mavelonate or the alternative pathway via DXP (page 2, lines 7–21 of the specification). However, because the DXP pathway was not even known at the time that Haughan et al. was published, Haughan et al. cannot teach or suggest a method for specifically measuring the inhibition of terpenoid biosynthesis via the DXP pathway. Therefore the claimed invention cannot be anticipated by this reference.

In view of the foregoing, Applicants believe that this rejection has been overcome and respectfully request its withdrawal.

Claim Rejections-35 U.S.C. § 102(a)

Claims 1–5, 7 and 18 are rejected by the Examiner under 35 U.S.C. 102(a) as being clearly anticipated by Fellermeier et al. (1999) *Tetrahedron Lett.* **49**:2743–2746.

Fellermeier et al. discloses a method comprising:

(a) preparing a suspension of chromoplasts in a culture medium containing ATP and labeled IPP,
(b) adding the labeled terpenoid precursor, [1,2 C^{14}] DXP or [1 H^3] MEP or [1 C^{14}] IPP,
(c) incubating,
(d) separating the product downstream (carotenes) from DXP by extraction,
(e) repeating a–d with the addition of a test compound, such as fosimodycin,
(f) comparing the control with the value obtained with the test compound.

Applicants assert that Fellermeier et al. was improperly cited under 35 U.S.C. § 102(a), as the present application claims priority to German Patent Application No. DE19857619, submitted December 12, 1998, which precedes the April 2, 1999 publication date of Fellermeier et al. Copies of DE19857619 in German and its English translation are submitted concurrently

herewith. Thus Applicants believe they have demonstrated in accordance with MPEP § 201.15 that the present application has a valid claim to priority of the date Decmber 12, 1998, which is before the publication date of the cited reference, thus Fellermeier et al. is improperly cited as art against the present application. For this reason, Applicants respectfully request that the rejection be withdrawn.

CONCLUSION

Applicant believes that the pending rejections have been adequately addressed and that the claims as presented are in condition for allowance. The Examiner is encouraged to contact the undersigned directly if such contact will expedite the examination and the allowance of the pending claims.

A check in the amount of $180.00 is enclosed as the fee for a Supplemental Information Disclosure Statement. This amount is believed to be correct; however, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-0220.

Respectfully submitted,

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Monica L. Croom